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(56) Documents Cited
GB 1256778 A GB 0720908 A

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(54) Abstract Title
A probe for a measuring instrument

(57) A probe 10 for a measuring instrument comprises a housing 12 and a biased member 14 within the housing. The biased member defines a probe point 16 that extends from the housing when the biased member is in a biased position (figure 1) and a hook 18 that is accessible when the biased member is urged from the hosing against the bias (figure 2).

FIG. 1

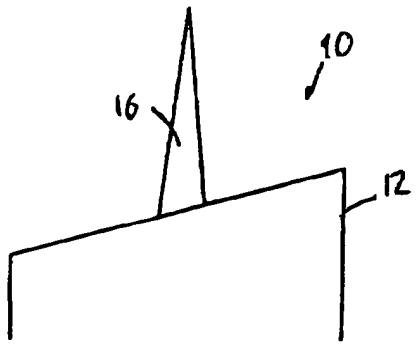
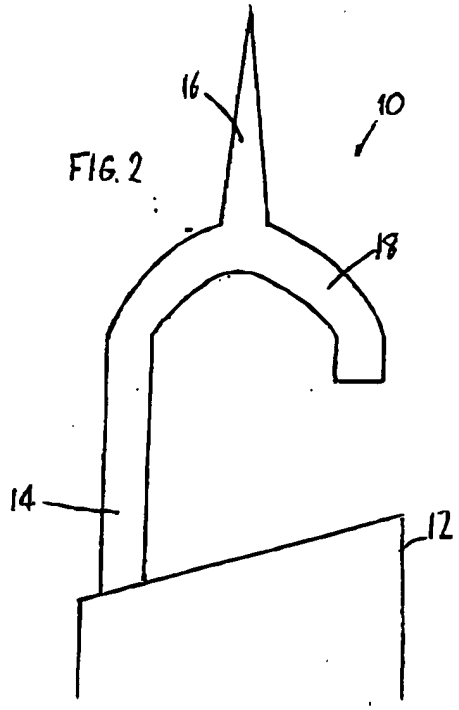


FIG. 2



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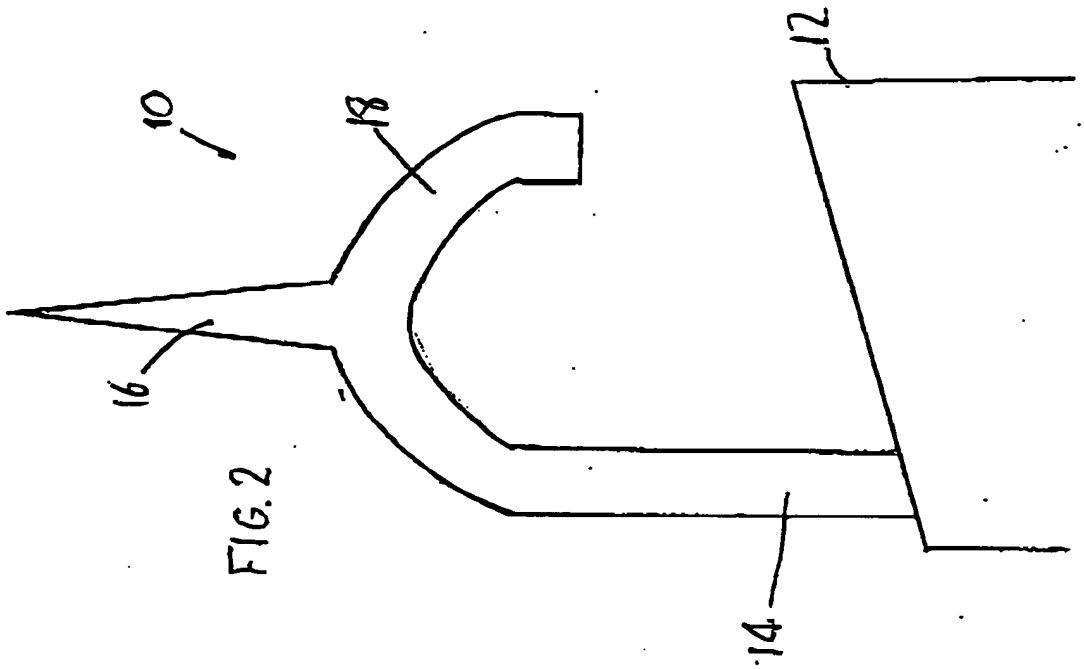

FIG. 2

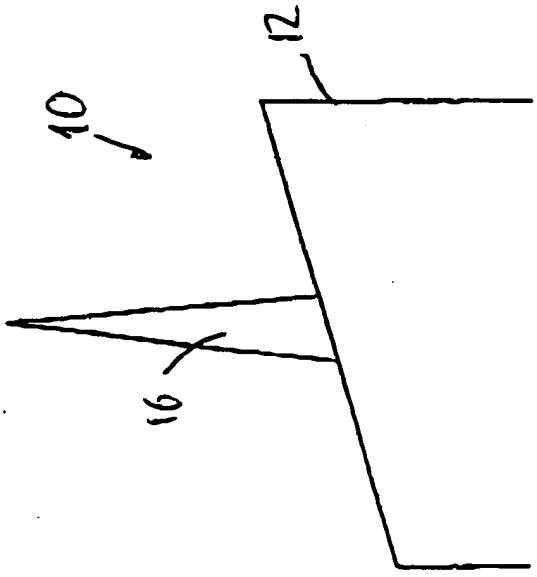

FIG. 1

A PROBE FOR A MEASURING INSTRUMENT

BACKGROUND OF THE INVENTION

I. Field of the Invention

The invention relates to a probe. More specifically, the invention relates to a probe for an electronic instrument such as an oscilloscope or a multi-meter.

II. Description of the Related Art

An oscilloscope or multi-meter probe typically comprises a probe handle having a conductive point or stud fixed thereto. A spring-loaded hook is supplied removably secured over the point to enable either the point or the hook to be used to take measurements from an electronic circuit during testing of the circuit.

The hook is not always used and, when it is required, it is often not to be found secured over the stud. This is inconvenient because time must be spent looking for the spring-loaded hook before it can be used. One alternative to the spring-loaded clip is to hold the stud in position during the measurement, but this is less than satisfactory because often the tester needs to have both hands free to perform other operations. Another alternative is to use crocodile clips or wire to connect to the circuit under test.

SUMMARY OF THE INVENTION

The invention addresses the above-discussed, and related, problems.

According to the invention there is provided a probe for a measuring instrument, the probe comprising a housing and a biased member within the housing, the biased member defining a probe point that extends from the housing when the biased member is in a biased position and a hook that is accessible when the biased member is urged from the hosing against the bias.

The above and further features of the invention are set forth with particularity in the appended claims and together with advantages thereof will become clearer from consideration of the following detailed description of an exemplary embodiment of the invention given with reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings:

FIG. 1 is a side view of a probe in a retracted position; and

FIG. 2 is a side view of the probe in an extended position.

DETAILED DESCRIPTION OF AN EMBODIMENT OF THE INVENTION

Turning now to FIG. 1 of the accompanying drawings, there is shown a probe 10 comprising a housing 12 containing a biased central member 14 from which a probe point 16 extends. The central member 14 of the probe is spring-loaded by way of one or more springs or other resilient members (not shown) provided in the housing 12 in a conventional manner.

The central member further defines a hook 18, as shown in FIG. 2 of the accompanying drawings. In use, the housing 12 may be drawn back to

reveal the hook 18, from which the point 14 extends, as shown in FIG. 2 of the accompanying drawings.

With the probe 10 in the position shown in FIG. 1, the point 14 may be used to take measurements from selected locations in an electronic circuit simply by applying the point 14 to a selected location. With the probe in the position shown in FIG. 2, the hook 18 may be used in the conventional manner to secure the probe to a test point or other location in a circuit under test.

The probe 10 thus provides a flexible arrangement by which either the hook 18 or the point 14 may be used without the fear of the hook becoming separated from the probe and mislaid.

Having thus described the invention by reference to a preferred embodiment it is to be well understood that the embodiment in question is exemplary only and that modifications and variations such as will occur to those possessed of appropriate knowledge and skills may be made without departure from the spirit and scope of the invention as set forth in the appended claims and equivalents thereof.

CLAIMS:

1. A probe for a measuring instrument, the probe comprising a housing and a biased member within the housing, the biased member defining a probe point that extends from the housing when the biased member is in a biased position and a hook that is accessible when the biased member is urged from the hosing against the bias.

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INVESTOR IN PEOPLE

Application No: GB 0130330.4
Claims searched: 1

Examiner: Frederick Fee
Date of search: 8 March 2002

Patents Act 1977
Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.T): H2E [EAHP]

Int Cl (Ed.7): G01R

Other: On-line: WPI, JAPIO, EPODAC

Documents considered to be relevant:

Category	Identity of document and relevant passage		Relevant to claims
X	GB 1256778	[ERIKSSON]	1
X	GB 0720908	[KOHNSTAM]	1

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

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5501630	04252730.9 - 2216

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COMMUNICATION

The European Patent Office herewith transmits as an enclosure the European search report (under R. 44 or R. 45 EPC) for the above-mentioned European patent application.

If applicable, copies of the documents cited in the European search report are attached.

☑ Additional set(s) of copies of the documents cited in the European search report is (are) enclosed as well.

The following specifications given by the applicant have been approved by the Search Division :

☑ Abstract ☐ Title

☐ The abstract was modified by the Search Division and the definitive text is attached to this communication.

The following figure will be published together with the abstract : 1

Refund of search fee

If applicable under Article 10 Rules relating to fees, a separate communication from the Receiving Section on the refund of the search fee will be sent later.

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European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 04 25 2730

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X Y	GB 2 383 474 A (* QUALCOMM) 25 June 2003 (2003-06-25) * abstract; figure 2 *	1-3,5 4	G01R1/073 G01R1/067
X	US 6 496 023 B1 (KANAMARU MASATOSHI ET AL) 17 December 2002 (2002-12-17) * figure 4 *	1-3,5-9	
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Y	US 2003/034782 A1 (HIRANO TAKAYUKI ET AL) 20 February 2003 (2003-02-20) * claim 1 *	4	
A	US 5 476 211 A (KHANDROS ET AL) 19 December 1995 (1995-12-19) * figures 6,7 *	1,2	TECHNICAL FIELDS SEARCHED (IPC) G01R

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	8 December 2005	Vytlacilová, L

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 04 25 2730

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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